

CLAIMS

We Claim:

5        1. A SLIM nucleic acid encoding a SLIM protein, comprising a nucleic acid sequence having at least about 90% identity to the nucleic acid sequence set forth in Figure 2, wherein said SLIM protein comprises an N-terminal myristylation sequence, an N-terminal SH2 domain, and an N-terminal SH3 domain and will bind to Cbl.

10      2. The SLIM nucleic acid according to Claim 1, wherein said SLIM protein lacks a tyrosine kinase domain.

15      3. The SLIM nucleic acid according to Claim 2, further comprising the nucleic acid sequence set forth in Figure 2.

20      4. A SLIM nucleic acid encoding a SLIM protein, comprising a nucleic acid sequence having at least about 90% identity to the nucleic acid sequence set forth in Figure 2, wherein said SLIM protein comprises an N-terminal myristylation sequence and an N-terminal SH2 domain and is unable to bind to Cbl.

25      5. A SLIM nucleic acid encoding a SLIM protein, comprising a nucleic acid sequence encoding an amino acid sequence having at least about 90% identity to the amino acid sequence set forth in Figure 2.

30      6. A SLIM protein, comprising an amino acid sequence having at least about 90% identity to the amino acid sequence set forth in Figure 2, wherein said SLIM protein comprises an N-terminal myristylation sequence, an N-terminal SH2 domain, and an N-terminal SH3 domain and will bind to Cbl.

35      7. The SLIM protein according to Claim 6, further comprising the amino acid sequence set forth in

Figure 2.

8. A SLIM protein, comprising an amino acid sequence having at least about 90% identity to the amino acid sequence set forth in Figure 2, wherein said SLIM protein comprises an N-terminal myristylation sequence and an N-terminal SH2 domain and is unable to bind to Cbl.

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9. A method for screening for a bioactive agent capable of binding to SLIM, comprising:

- a) contacting a SLIM protein and a candidate agent; and
- b) determining the binding of candidate bioactive agent to SLIM protein;

10. wherein said SLIM protein comprises an amino acid sequence having at least about 95% identity to the amino acid sequence set forth in Figure 2.

15 10. A method for screening for a bioactive agent capable of modulating SLIM binding, comprising:

- a) combining a SLIM protein, a candidate bioactive agent and Cbl; and
- b) determining the binding of Cbl to SLIM in the presence of candidate bioactive agent;

wherein said SLIM protein comprises an amino acid sequence having at least about 95% identity to the amino acid sequence set forth in Figure 2 and wherein said SLIM protein will bind to Cbl in the absence of candidate bioactive agent.

20 11. A method for screening for a bioactive agent capable of modulating lymphocyte activation, comprising:

- a) contacting a candidate bioactive agent to a lymphocyte comprising a recombinant nucleic acid encoding a SLIM protein;
- b) inducing activation of said lymphocyte; and
- c) determining the activation of said lymphocyte in the presence and absence of said candidate bioactive agent;

25 wherein said SLIM protein comprises an amino acid sequence having at least about 95% identity to the amino acid sequence set forth in Figure 2, and wherein a difference in the activation of said lymphocyte in the presence and absence of said candidate bioactive agent indicates that said candidate bioactive agent is capable of modulating lymphocyte activation.

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12. The method according to Claim 11, wherein said SLIM protein comprises the amino acid sequence set forth in Figure 2.

13. The method according to Claim 11, wherein lymphocyte activation is done by activating antigen receptor in said lymphocyte.

14. The method according to Claim 11, wherein determining the activation of said lymphocyte comprises determining the activity of a nuclear factor in activated T cells (NFAT) responsive promoter.

15. The method according to Claim 11, wherein determining the activation of said lymphocyte comprises determining the expression of CD69.

16. A method for screening for a bioactive agent capable of modulating the ubiquitination of a Cbl target protein, comprising:

- a) combining SLIM, Cbl, ubiquitin or polyubiquitin, and a Cbl target protein; and
- b) determining the level of ubiquitination of Cbl target protein in the presence and absence of candidate bioactive agent;

wherein said SLIM protein comprises an amino acid sequence having at least about 95% identity to the amino acid sequence set forth in Figure 2 and will bind to Cbl and Cbl target protein in the absence of candidate agent, wherein a change in the level of ubiquitination of Cbl target protein in the presence of candidate agent indicates that said candidate bioactive agent is capable of modulating the ubiquitination of a Cbl target protein.